## IN THE CLAIMS:

1	1. (CURRENTLY AMENDED) A method of operating a switch for frames in a computer
2	network, comprising:
3	receiving a frame (the received frame) at a port of said switch, said received
4	frame containing one or more indicia of frame type designation, said one or more indicia
5	of frame type including an indicia of a protocol type;
6	accessing a virtual local area network (VLAN) value associated with the port;
7	deriving a virtual local area network (derived VLAN) value in response to said
8	one or more indicia of frame type designation and said VLAN value, said derived VLAN
9	value for use internal to said switch;
10	accessing a forwarding data base with said derived VLAN value to determine a
11	destination address; and,
12	forwarding, in response to said derived VLAN value, said received frame to an
13	output port for transmission to the destination address.
1	2. (CURRENTLY AMENDED) The method of claim 1 further comprising, said for-
2	warding step forwarding in response to said derived VLAN value and said destination
3	address.
4	3. (CANCELLED)
1	4. (CURRENTLY AMENDED) The method of claim 1 wherein said indicia of frame
2	type designation further comprises:
3	a subnet value.

3	an index value associated with a port at which said received frame was received.
1	8. (ORIGINAL) The method of claim 1 further comprising:
2	deriving a MAC address from said derived VLAN value and forwarding said re-
3	ceived frame to a port for transmission to a destination having said MAC address.
1	9. (CURRENTLY AMENDED) An apparatus switch to forward frames in a computer
2	network, comprising:
3	a port to receive a frame (the received frame), said port associated with a virtual
4	local area network (VLAN) value, said received frame containing one or more indicia of
5	frame type-designation, said one or more indicia of frame type including an indicia of a
6	protocol type;
7	a parsing engine to derive a virtual local area network (derived VLAN) value in
8	response to said one or more indicia of frame type-designation and said VLAN value,
9	said derived VLAN for use internal to said switch;
10	a forwarding data base configured to use having said derived VLAN value as an
11	input and to yield a destination address as an output; and,
12	an output port to transmit said received frame, in response to said derived VLAN
13	value, for transmission to said destination address.
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6. (CURRENTLY AMENDED) The method of claim 1 wherein said indicia of frame

7. (CURRENTLY AMENDED) The method of claim 1 wherein said indicia of frame

type designation further comprises: an IP source address.

5. (CANCELLED)

2 type designation further comprises:

a forwarding engine for forwarding said received frame in response to said de-

3	rived VLAN value and said destination address.
1	11. (CURRENTLY AMENDED) A computer readable media containing instructions for
2	the practice of operating a switch for frames in a computer network, comprising:
3	receiving a frame (the-received frame) at a port of said switch, said received
4	frame containing one or more indicia of frame type designation, said one or more indicia
5	of frame type including an indicia of a protocol type;
6	accessing a virtual local area network (VLAN) value associated with the port;
7	deriving a virtual local area network (derived VLAN) value in response to said
8	one or more indicia of frame type designation and said VLAN value, said derived VLAN
9	value for use internal to said switch;
0	accessing a forwarding data base with said derived VLAN value to determine a
1	destination address; and,
2	forwarding, in response to said derived VLAN value, said received frame to an
.3	output port for transmission to the destination address.

10. (ORIGINAL) The apparatus as in claim 9 further comprising:

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12. (CANCELLED)

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puter network, comprising:

using one or more indicia of frame type designation-found in a received frame to

13. (CURRENTLY AMENDED) A method of operating a switch for frames in a com-

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7 using the derived VLAN value in making forwarding decisions. 14. (ORIGINAL) The method of claim 13 further comprising: 2 controlling broadcast domains in the computer network by forwarding in response to the derived VLAN value. 3 15. (PREVIOUSLY PRESENTED) The method of claim 13 further comprising: using an indicia of a receiving port in constructing the derived VLAN value. 16. (CURRENTLY AMENDED) A computer readable media containing instructions for the practice of operating a switch for frames in a computer network, comprising: using one or more indicia of frame type designation-found in the received frame 3 to derive a virtual local area network (derived VLAN) value, said derived VLAN used internal to said switch, said derived VLAN value different from a VLAN value associated the frame external to the switch; and using the derived VLAN value in making forwarding decisions. 7 17. (CANCELLED)

internal to said switch, said derived VLAN value different from a VLAN value associated

the frame external to the switch; and

puter network, comprising:

18. (CURRENTLY AMENDED) A method of operating a switch for frames in a com-

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4	frame containing one or more indicia of frame type-designation, said one or more indicia
5	of frame type including an indicia of a protocol type;
6	accessing a port index value associated with the port;
7	deriving a virtual local area network (derived VLAN) value in response to said
8	one or more indicia of frame type-designation and said port index value;
9	accessing a forwarding data base with said derived VLAN value to determine a
10	destination address; and,
11	forwarding, in response to said derived VLAN value, said received frame to an
12	output port for transmission to the destination address.
1	19. (CURRENTLY AMENDED) An apparatus switch to forward frames in a computer
2	network, comprising:
3	a port to receive a frame (the received frame), said port associated with a index
4	value, said received frame containing one or more indicia of frame type-designation, said
5	one or more indicia of frame type including an indicia of a protocol type;
6	a parsing engine to derive a virtual local area network (derived VLAN) value in
7	response to said one or more indicia of frame type designation and said index value;
8	a forwarding data base having configured to use said derived VLAN value as in-
9	nut and to yield a destination address as output: and

receiving a frame (the received frame) at a port of said switch, said received

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20. (CURRENTLY AMENDED) An apparatus to forward frames in a computer network,

an output port to transmit said received frame, in response to said derived VLAN

value, for transmission to said destination address.

comprising:

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3 means for receiving a frame (the-received frame) at a port of said switch, said received frame containing one or more indicia of frame type-designation, said one or more 4 indicia of frame type including an indicia of a protocol type; 5 means for accessing a index value associated with the means for receiving a 6 frame: 7 means for deriving a virtual local area network (derived VLAN) value in response 8 to said one or more indicia of frame type-designation and said index value; 9 10 means for accessing a forwarding data base with said derived VLAN value to determine a destination address; and, means for forwarding, in response to said derived VLAN value, said received 12 frame to an output port for transmission to the destination. 13 21-23. (CANCELLED) 24. (NEW) The method of claim 1 wherein the step of deriving further comprises: generating a protocol code from the indicia of protocol type; 2 3 combining the protocol code with the VLAN value to produce a mapping address; and accessing a memory structure with the mapping address to obtain the derived VLAN value 25. (NEW) The method of claim 1 wherein the indicia of protocol type indicates an 2 Internet Protocol (IP) protocol type.

- 1 26. (NEW) The apparatus as in claim 9 further comprising:
- a protocol mapping table to map the indicia of protocol type to a protocol code;
- 3 and
- wherein the parsing engine is configured to combine the protocol code with the
- 5 VLAN value to produce a mapping address and to access a memory structure with the
- 6 mapping address to obtain the derived VLAN.
- 1 27. (NEW) The apparatus as in claim 9 wherein the indicia of protocol type indicates an
- 2 Internet Protocol (IP) protocol type.
- 28. (NEW) The method of claim 18 wherein the step of deriving further comprises:
- generating a protocol code from the indicia of protocol type;
- combining the protocol code with the index value to produce a mapping address;
- 4 and
- 5 accessing a memory structure with the mapping address to obtain the derived
- 6 VLAN.
- 1 29. (NEW) The method of claim 18 wherein the indicia of protocol type indicates an
- 2 Internet Protocol (IP) protocol type.
- 1 30. (NEW) The apparatus as in claim 19 further comprising:
- a protocol mapping table to map the indicia of protocol type to a protocol code;
- 3 and
- 4 wherein the parsing engine is configured to combine the protocol code with the
- 5 index value to produce a mapping address and to access a memory structure with the
- 6 mapping address to obtain the derived VLAN.

- 1 31. (NEW) The apparatus as in claim 19 wherein the indicia of protocol type indicates
- an Internet Protocol (IP) protocol type.